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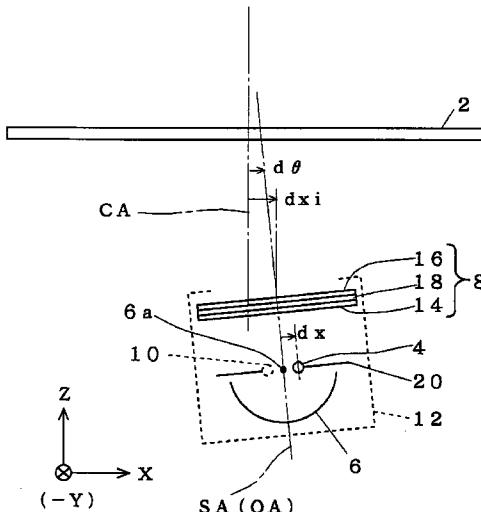
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### (54) Illumination apparatus

(57) An illumination apparatus is disclosed which efficiently irradiates an irradiation surface (2) without destroying the symmetry of an illuminance distribution at the irradiation surface (2). A light source (4) is displaced from a center of curvature (6a) of a spherical mirror (6) in a direction in a displacement plane which includes an axis of symmetry (SA) of the spherical mirror (6) so as to form a light source image at a position off the light source (4). Due to this, a ray from the spherical mirror (6) passes off the light source (4) (i.e., the position of the light source image), and therefore, a reflection ray is not shielded, absorbed nor otherwise disturbed by the light source (4), which in turn prevents deterioration in the efficiency of utilization of light. Further, the light source (4), the spherical mirror (6) and the lens (8) are assembled into a light source unit (12) which is inclined at an angle about a principal point of the lens (8) with respect to a central axis (CA) of the irradiation surface (2) and displaced a certain distance in a displacement direction (X) which is perpendicular to the central axis (CA). Hence, the illuminance distribution at the irradiation surface is adjusted and the symmetry of the illuminance distribution at the irradiation surface is improved.

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EP 0 691 558 A3



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## EUROPEAN SEARCH REPORT

Application Number

DOCUMENTS CONSIDERED TO BE RELEVANT			EP 95109481.2
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 6)
Y	SOVIET INVENTIONS ILLUSTRATED, PQ section, week 8422, September 07, 1983 DERWENT PUBLICATIONS LTD., London; & SU-A-1039 886 (KOROBCHENKO I.A.) --	1-4	G 02 B 19/00 G 02 B 27/18 F 21 V 7/00
Y	<u>EP - A - 0 376 398</u> (N.V. PHILIPS') * Fig. 2; abstract * --	1-4	
A	<u>GB - A - 1 204 222</u> (SYLVANIA ELECTRIC PRODUCTS) * Page 2, lines 29-51; fig. 3; page 3, line 91 - page 4, line 74 * --	1, 2	
A	<u>EP - A - 0 299 475</u> (DAINIPPON) * Abstract; fig. 9, 81 * --	1, 5-8	TECHNICAL FIELDS SEARCHED (Int. Cl. 6)
A	<u>DE - A - 2 537 547</u> (MINNESOTA MINING) * Fig. 6, 7 * --	1, 7	G 02 B F 21 V
D, A	PATENT ABSTRACTS OF JAPAN, unexamined applications, P field, vol. 15, no. 67, February 18, 1991 THE PATENT OFFICE JAPANESE GOVERNMENT page 30 P 1167; & JP-A-02 289 834 (CANON) ----	1, 5, 7 8	
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search		Examiner
VIENNA	21-11-1995		GRONAU
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			